

ABSTRACT OF THE DISCLOSURE

A groove is formed on a semiconductor substrate having integrated circuits and electrodes from a first surface. An insulating layer is formed on an inner surface of the
5 groove. A conductive layer is formed on the insulating layer above the inner surface of the groove. A second surface of the semiconductor substrate opposite to the first surface is ground until the groove is exposed to divide the semiconductor substrate into a plurality of semiconductor chips in which the conductive layer is exposed on a side surface of each semiconductor chip. The semiconductor chips are then stacked. The
10 conductive layer of one of the semiconductor chips is electrically connected to the conductive layer of another one of the semiconductor chips.